

Remarks

General:

Claims 1-40 are pending in this application. Claims 1-40 stand rejected. Claim 19 is canceled. Claims 41-43 are new. Claims 1, 8, 20-28, and 39 are amended. Claims 1-18 and 20-43 are pending in this application after the present amendment. No new matter has been added by this amendment.

35 U.S.C. § 112:

Claims 1-18 stand rejected as indefinite on the ground that there was no antecedent for “said locking wedges” in the last line of claim 1. Claim 1 has been amended to refer consistently to the locking wedge of the at least one locking lever. It is noted that claim 2 recites at least two locking levers, so that claims dependent from claim 2 correctly recite plural locking wedges.

35 U.S.C. § 102:

Claims 1-3, 6-12, 16, 19, 22-25, 28-29, 32-34, 36, and 38-40 stand rejected as anticipated by U.S. Patent No. 3,642,161 (Stroud).

The examiner contends that the semi-circular locking toe 30 of Stroud anticipates not only the locking wedge recited in claims 1 and 28, but also the locking wedge lead angle recited in claim 7 and the locking angle recited in claim 8, on the ground that “a rounded surface comprises tangential points through the range of 0 – 180 degrees.” It is respectfully pointed out that a semicircle is not a wedge, and that while a rounded surface may comprise *points* throughout a range of angles, it does not comprise a *surface defining* any specific angle. The examiner’s interpretation not only stretches the English language far beyond the “broadest reasonable interpretation,” but also requires entire phrases of claims 7 and 8 to be ignored, which is presumptively wrong.

It is respectfully pointed out that there is a fundamental difference between the containers of the cited references, including Stroud, and the containers of the present invention. The references are concerned, as expressed in the Class Schedule for class 215/201 (under which most of the cited references are indented) with “closures having warning means or means impeding closure removal (e.g., child proof).” There is no need for the latches of Stroud’s container to resist strong upward forces, because a small child would not be able or motivated to

exert a strong force. There is no need for Stroud's container to form a seal, or if it is sealed to maintain that seal under pressure, because a childproof pill bottle does not need to contain an internal pressure. On the other hand, it is highly desirable for Stroud's container to require an awkward manipulation that is difficult for a small child to master.

The present invention, as explained in paragraphs [0003], [0004], and [0007], is concerned primarily with closures that will remain secure in use, but are easy to install and easy to remove. The locking wedge advances this purpose, by providing a secure engagement that requires no manipulation when installing the closure, because the wedge engages automatically under the force of the elastically deformable hinge, and does not hinder removal, because a force on the latch in the opening direction naturally lifts the wedge out of engagement with the rim of the container. The wedge naturally latches to a position where there is no play between the container and the closure, and a positive vertical sealing force holding the closure secure, and remains in that position until it is released. In the latched position, the locking wedge retains the closure against the steam pressure that builds up when the contents of the container are heated.

In contrast, the semicircular toe of Stroud must seat completely under the lip if the toe is to resist lifting forces at all. The shape of Stroud's toe cannot provide a useful vertical tolerance. As a result, Stroud's toe will in practice either be a snap action both to close and to release, or be loose under the lip when installed. Either of those outcomes would be acceptable for a childproof pill bottle. Neither of those outcomes can serve the purpose of providing a closure that seals readily and is easy to remove.

In order to emphasize the difference between the applicants' closure and the lid of Stroud, claims 1 and 28 have been amended, using language from claim 8 and from paragraph [0037] of the description, to recite the locking wedge having an inclined retention surface defining a locking angle. Claims 1 and 28 have been amended, using language based on paragraph [0007] of the description, to recite that the closure is easily installable and removable.

There is nothing in the cited reference to suggest using a wedge having an inclined surface, and it is believed that the present invention, as claimed in claims 1 and 28, is both new and non-obvious over the cited reference. Claims 7 and 8, which recite wedge surfaces defining specific angles, are believed to be novel and non-obvious over Stroud.

Claims 2-3, 6, 9-12, 16, and 38 are dependent from claim 1 and claims 29, 32-34, 36, and 40 are dependent from claim 28. Without prejudice to their individual merits, these claims are believed to be novel and non-obvious over Stroud for the same reasons as claims 1 and 28.

New claim 41, which is otherwise based on original claim 1, recites that the cap includes one or more openings for venting the material within the container. Basis for this feature is found in paragraph [0034]. The vent openings are visible in Figures 1, 2, 3, and 8 as four small circles in the flat central area of the lid 12. The examiner asserts (as part of an obviousness rejection of claim 13) that Stroud "teaches an opening in the cover" but does not identify this "opening" or explain its function. It is supposed (because no other possible opening can be found) that the examiner intends to refer to the "opening formed in the center of the cover plate 20 of the base cap 16" (col. 4, lines 13-14) in which the tubular locking projection 36 of the rotatable top cap 18 is journaled. However, that opening does not actually constitute an opening in the closure, because it is both plugged and closed off by the top cap 18. That opening cannot act as a vent, because any internal pressure would cause the rib on the locking projection 36 to seal against the underside of the cover plate 20. There is, thus, no disclosure or suggestion in the cited references of providing the cap with one or more openings for venting the container, and it is believed that the present invention, as claimed in claim 41, is both new and non-obvious over the cited prior art.

It is respectfully pointed out that the difference between the locking wedge of the present invention and the semicircular toe of Stroud is relevant even to the vented closure of claim 41, because in a preferred embodiment the vents are small, so that a pressure can still build up inside the closure during rapid heating.

Claims 22-27 and 39 have been made dependent from new claim 41 and, without prejudice to their individual merits, are believed to be allowable for the same reasons as claim 41. In addition, however, claim 27 is believed to be allowable for the same reasons as claim 18.

New claim 42, which is otherwise based on claim 28, recites that the actuation arms form part of a segmented outer ring of the closure, and that the rim of the container is gripped between the locking arms and a sealing member on the closure. Basis for the segmented outer ring is found in paragraph [0034]. Basis for the sealing member is found in the ring member 22 with its sealing surface 24 as described in paragraphs [0034] and [0035]. It is noted that Stroud's flange 22 is somewhat similar to applicants' flange 22, although it is impossible to discern the exact

structure from Stroud's drawings. However, Stroud's flange 22 is apparently not a sealing flange, because Stroud (col. 3, lines 33-37) specifically says that the flange may be interrupted. It would not have been obvious to modify Stroud's closure to provide a segmented outer ring, because the only function of such a ring is to reduce the risk of inadvertent or accidental operation of the actuating arms, and in Stroud that function is carried out by the rotatable top cap 18. For these reasons also, it is believed that the present invention, as now claimed in claim 42, is new and non-obvious.

35 U.S.C. § 103:

Claims 4, 5, 20, 21, 30, and 31 stand rejected as obvious over Stroud in view of U.S. Patent No. 3,688,942 (Mitchell) and U.S. Patent Application No. 2003/0085227 (Azzarello). These are dependent claims, and are deemed allowable for the same reasons as their respective base claims are deemed allowable over Stroud alone. In addition, however, it is respectfully pointed out that Mitchell teaches a device in which locking tabs must be opened successively, and must, therefore, be left in a stable unlocked state (see col. 4, line 35). Mitchell's teaching is inappropriate to Stroud's childproof medicine bottle, because it creates a high risk of the bottle being left closed but unlatched. Azzarello teaches a closure in which the plurality of tamper-proof locking tabs are to be torn off, one at a time, before the container can be opened. Azzarello provides a separate, single, child-proof locking device. Thus, neither of these references fairly teaches or suggests a childproof fastening relying on a plurality of latches.

Claim 13 stands rejected as obvious over Stroud in view of U.S. Patent No. 6,575,323 (Martin). Claim 13 is a dependent claim, and is deemed allowable for the same reasons as claim 1 is deemed allowable over Stroud alone. In addition, however, the examiner argues that it would be obvious to modify Stroud's closure to provide the dispensing opening (and flap covering that opening) of Martin. It is respectfully pointed out that, as the examiner has noted elsewhere, the whole point of Stroud is to provide a childproof closure. A dispensing opening and covering flap as taught by Martin would bypass the childproof fastening, and completely defeat Stroud's purpose. For that reason alone the combination is improper. Thus, the combination of features proposed by the examiner would not have been obvious because, seen as a modification of Stroud's childproof lid, it would have been completely senseless. "[T]he question is whether there is something in the prior art as a whole to suggest the desirability, and

thus the obviousness, of making the combination.” *In re Fulton*, 73 USPQ2d 1141, 1145 (Fed. Cir. 2005), quoting from *In re Beattie*, 974 F.2d 1309, 1311 [24 USPQ2d 1040] (Fed. Cir. 1992). Here, the prior art suggests that the combination would have been undesirable, and therefore non-obvious. Only the present invention provides a motivation to combine the features in question.

Claims 14, 26, and 35 stand rejected as obvious over Stroud in view of U.S. Patent No. 5,865,330 (Buono). Claim 15 stands rejected as obvious over Stroud in view of Buono and further in view of U.S. Patent No. 5,881,907 (Schutz). Claims 17 and 37 stand rejected as obvious over Stroud in view of certain matters alleged to be well known in the art. Claims 18 and 27 stand rejected as obvious over Stroud in view of U.S. Patent No. 6,439,409 (Dressel). It is noted that the examiner’s arguments are directed to the additional features recited in these claims. Without prejudice to their individual merits, claims 14, 15, 17, 26, 27, 35, and 37 are deemed allowable over these combinations of references for the same reasons as their respective base claims are allowable over Stroud alone.

In addition, however, claim 18 recites that the deformable hinge is segmented, and new claim 43 recites that the hinge comprises three segments. Basis for claim 43 is found in the three hinge segments 16a, 16b, 16c shown in Fig. 13a and described in paragraph [0054]. A similar structure is shown in Fig. 7. With reference to claim 18, the examiner argues that “it would have been obvious ... to modify the integral hinge of Stroud ’161 with the segmented hinge comprising fulcra taught by Dressel ’409, motivated by the benefit of reduced material consumption and a more flexible hinge.” The examiner is respectfully reminded that the motivation must be provided by the prior art. In the present case, the cited references do not suggest that it was desirable to increase the flexibility of Stroud’s hinge, do not suggest that replacing a one-piece hinge with a segmented hinge is an appropriate way to increase the flexibility of the hinge, and do not suggest that a segmented hinge uses less material than a one-piece hinge of the same flexibility. The examiner has therefore failed to make out a prima facie case of obviousness of original claim 18. In addition, however, claim 18 is dependent from claim 1 and, by virtue of that dependence, is directed to a closure with a locking wedge. As discussed above, the engagement of a locking wedge is different both in action and in effect from the engagement of Stroud’s or Dressel’s semicircular toe, so a person of ordinary skill in the art would have no reason to suppose that a modification appropriate to Stroud would be appropriate

to the present invention. New claim 43 further recites a three-piece segmented hinge. That is a configuration of higher stiffness than Dressel's two-piece hinge, so if the examiner's argument against claim 18 is correct that argument actually teaches away from claim 43. For these reasons also, it is believed that the present invention, as claimed in claims 18 and 43, was not obvious over the cited references.

For all of the above reasons, it is believed that all of claims 1-18 and 20-43 are allowable over the cited prior art.

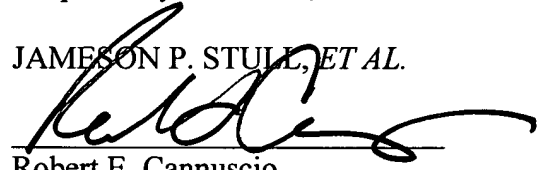
Conclusion:

It is respectfully submitted that all pending claims are in condition for allowance, and Applicant respectfully requests that allowance be granted at the earliest date possible. Should the Examiner have any questions or comments regarding Applicant's amendments or response, the Examiner is asked to contact Applicant's undersigned representative.

Respectfully submitted,

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